From owner-boatanchors@gnu.ai.mit.edu Fri Oct 14 19:24:43 1994

Date: Fri, 14 Oct 1994 13:12:57 -0400

From: JosephWP@aol.com

Message-Id: <9410141312563817193@aol.com>

Subject: 5814A

You guys need to check your tube manuals out.

The 5814A is the premium version of the 12AU7 NOT the 12SN7GT or 12AV7 or 12AY7.

Joseph Pinner + Lafayette, LA KC5IJD

From owner-boatanchors@gnu.ai.mit.edu Fri Oct 14 07:03:27 1994

Date: Thu, 13 Oct 1994 10:09:19 -0400 From: "Rhett T. George" <rtg@ee.duke.edu> Subject: <didn't bother with a subject>

Message-Id: <199410131409.KAA78469@ee.ee.duke.edu>

- Greetings, Boatanchor Enthusiasts -

Thanks again to all who responded to my questions regarding the Gonset Communicator IV. Another question, please. What is the multiplication factor from crystal frequency to final frequency? Many thanks.

Rhett - KE4HIH

From owner-boatanchors@gnu.ai.mit.edu Fri Oct 14 07:19:17 1994

Date: Thu, 13 Oct 94 10:03:44 -0500

From: rbiddle@madvax.mo.ti.com (Richard Biddle)

Subject: <didn't bother with a subject>

Message-Id: <9410131503.AA28696@MadVax.mo.ti.com>

To: boatanchors@gnu.ai.mit.edu

>From: Richard Biddle <rbiddle@madvax.mo.ti.com>

Subject: Name Plate for BC-224B

Greetings all.

Would anyone happen to have a name plate for an RCA BC-224B (or similar model) that they could make a clean photocopy of for me? I am fixing up old project and the name plate is missing. Of course I'd love to find a source for the real thing, but I though I would cobble one up from a copy as a last resort.

E-mail me if you can help. I'll gladly pay a fair price.

On a related note, I know there is an ftp site at ishtar.med.jhu.edu with a pub/radio directory for collecting boat-anchor pictures. (Run by Mark, WA3YNO.) Any interest in scanned images of labels and so-forth being placed there for restorations?

Thanks, Richard KB5WLH

From owner-boatanchors@gnu.ai.mit.edu Fri Oct 14 07:49:57 1994

Date: Thu, 13 Oct 1994 14:14:24 -0400 From: "Rhett T. George" <rtg@ee.duke.edu> Subject: <didn't bother with a subject>

Message-Id: <199410131814.0AA116238@ee.ee.duke.edu>

- Greetings, Boatanchor Enthusiasts - A bit of history portrayed. Borrow a copy of "the institute," the newspaper of the IEEE for September, 94. On page 3 is a picture of the Poulsen Arc transmitter in Lyngby, Denmark, along with a short blurb.

Rhett - KE4HIH

From owner-boatanchors@gnu.ai.mit.edu Fri Oct 14 09:14:29 1994

From: ab4el@Cybernetics.NET (Stephen Modena)

Message-Id: <9410140314.AA19213@Cybernetics.NET>

Subject: Re: A Request & HossTraders

Date: Thu, 13 Oct 1994 23:14:05 -0400 (EDT)

- > Date: Thu, 13 Oct 94 13:58:22 EDT
- > From: dennis@irissun2.fp.trw.com (Dennis Gibbs)

>

- > >Also picked up one R-390-A and three (3) R-392-A's...so I asked
- > > "what's a TWO?" and he said: it runs on 28 volts throughout,
- > >filaments and plates.

>

- > Regarding the "R-392-A" Did these units definitely have an 'A'
- > after the 'R-392', or was this a typo? I am not aware of an 'A'
- > version of this receiver...Does one exist, and if so, how does it
- > differ from the regular R-392?

There is no "A" except as a twitch of my typing finger. :^)

* * *

A side note referring back to an earlier conversation about "famous hams:"

while at the library today, I perused a displayed book on Jimmy Stewart's career...and learned that he was in charge of a Liberator group and lead raids into Germany....and later was Chief of Staff of the Second Combat Wing of the 8th (Army) Air Force. I hadn't known that. Certainly talented in more than one way....

The book noted that Stewart had been rejected on his first attempt to enlist...for being "too skinny." That kind of rang a bell: last year I met Richard Hamming, now of the Naval Postgraduate School, previously of Bell Labs, previously of the Los Alamos "bomb project." He had commented that the military rejected him for service because he was too skinny...under the assumption that he was probably consumptive (TB)...but he had simply straved himself to get through college and grad school on no money.

73/Steve/AB4EL ab4el@Cybernetics.NET

From owner-boatanchors@gnu.ai.mit.edu Fri Oct 14 11:07:18 1994

From: Thomas Bryan <tbryan@mailstorm.dot.gov>

Message-Id: <199410141258.AA03757@mailstorm.dot.gov>

Subject: Boatanchor hunting in Iowa?

Date: Fri, 14 Oct 1994 08:58:39 -0400 (EDT)

Hello,

Does anyone know of any good places for boatanchor hunting in southern Iowa or northern Missouri? I will be visiting the area in the near future. If you do send me an email, any leads will be appreciated.

Tom Bryan
tbryan@mailstorm.dot.gov

From owner-boatanchors@gnu.ai.mit.edu Fri Oct 14 23:47:58 1994

Date: Sat, 15 Oct 94 01:56:55 UTC Message-Id: <81293@w5ddl.aara.org>

From: n5off@w5ddl.aara.org

Subject: C line mint, don't call me.

---- Forwarded message -----

R:941013/1249 16207@KB50GN.#NILA.LA.USA.NOAM

R:941013/1320 36337@KD1CA.RI.USA.NOAM R:941013/1218 15281@KA1RCI.RI.USA.NOAM

R:941013/0552 6581@WG1I.FN42KK.MA.USA.NOAM

R:941013/0545 3080@WA1PHY.FN42JM.MA.USA.NA
R:941013/0331 47847@KC1PK.#EMA.MA.USA.NA
R:941013/0424 46183@WB1DSW.FN42LV.NH.USA.NOAM
R:941013/0323 56734@WA1WOK.FN43FE.NH.USA.NOAM
R:941013/0320 3759@KA1RTW.FN43WT.ME.USA.NA
R:941013/0239 12765@NS1Z.FN44RN.ME.USA.NOAM
R:941012/1659 40941@K1RQG.ME.USA.NA

For Sale:

R.L. Drake "C" Line
Estate Sale-----Absolutely Mint Condition
R-4C Receiver
T-4XC Transmitter
MS-4 Speaker/Power Supply
7075 Drake Mic.
All Connecting Cables
All Original Manuals
Packed in Original Boxes
Ready to hook up and go
Everything works to Mfg. Specs.
All of the above for \$575.00 + shipping
Call Bruce Lanning W1GBS at 207-963-2370
Winter Harbor, Maine

---- End of forwarded message -----

From owner-boatanchors@gnu.ai.mit.edu Fri Oct 14 07:50:42 1994

From: Scott_Johnson-AZAX60@email.sps.mot.com

Date: 13 Oct 94 09:42:19 -0600

Subject: RE>Do these tubes have anot

Message-Id: <"Macintosh */PRMD=MOT/ADMD=MOT/C=US/"@MHS>

Reply to: RE>Do these tubes have another numbe The 5686 is a nine pin mini similar in specs to a 6AQ5/6005. I do not know of a sub.

The 5814 is equivalent to either a 12AV7 or a 12AY7, I can't remember, but they are extremely plentiful. Dual triode.

Date: 10/13/94 2:01 AM

To: Scott Johnson

>From: mc@shore.net@azbcsm1

I found some tubes recently and don't recognize the number - I believe its

a military number. u???~???~???~???~???? ;?

??~???~???~? Can any of you

knowlegeable chaps tell me if these tube

```
numbers have a civilian equivilent - one that I might recognize?
5686
5814A
Thanks for your help.
Cordially,
Michael
From owner-boatanchors@gnu.ai.mit.edu Fri Oct 14 08:37:45 1994
Date: Thu, 13 Oct 1994 19:03:29 -0500
Message-Id: <199410140003.AA06717@eceserv0.ece.wisc.edu>
From: beyer@eceserv0.ece.wisc.edu (James B. Beyer)
Subject: Re: Do these tubes have another number???
>I found some tubes recently and don't recognize the number - I believe its
>you knowlegeable chaps tell me if these tube
>numbers have a civilian equivilent - one that I might recognize?
>5686
>5814A
Michael,
       5814A=12SN7GT
       5686 is a 6V beam power pentode, don't have an equivalent number
but I can send specs if you wish. These are not military designations, I
believe they were called "Industrial"
                            Jim Beyer W9ADJ
PS: my references are old ARRL handbooks which I have found for as little
as two bits at garage sales
From owner-boatanchors@gnu.ai.mit.edu Fri Oct 14 08:50:38 1994
Date: Thu, 13 Oct 1994 19:34:16 -0400 (EDT)
From: "J. D. Delancy" <k1zat@bah.com>
Subject: Re: Do these tubes have another number???
Message-Id: <Pine.3.05.9410131914.A11016-a100000@booz.bah.com>
```

```
On Wed, 12 Oct 1994, Michael Crestohl wrote:
> 5686
My 1974 tube manual doesn't give a "civilian" equivalent number
but here are the values for it:
  Base: 9G, Pin-1: KG3, Pin-2: G1, Pin-3: KG3, Pin-4: filament
             Pin-5: filament, Pin-6: G2, Pin-7: Plate, Pin-8:KG3
             Pin-9: G2
  Name: Beam Power Tube
  Filament: 6.3V, 0.35 amp, 6.4 Cin, 8.5 Cout, 0.11 Cgp
  Plate Supply: 250V
  Grid Bias: -12.5
  Screen Voltage: 250
  Screen ma: 3 to the 5th
  Plate Res Ohms: 45K
  Plate ma: 27 to the 5th
  Transconductance: 3100
  Load resistance ohms: 9K
  Watts output: 2.7
> 5814A
No help here except that base is 9A
   Pin-1: PT2, Pin-2: Gt2, Pin-3: Kt2, Pin-4: filament
   Pin-5: filament, Pin-6: Pt1, Pin-7: Gt1, Pin-8: Kt1
   Pin-9: Hct
> Thanks for your help.
Hope it does.
    jd
From owner-boatanchors@gnu.ai.mit.edu Fri Oct 14 14:43:54 1994
Date: Fri, 14 Oct 94 11:07:38 EST
From: "Roy Morgan" <morgan@speckle.ncsl.nist.gov>
Message-Id: <53134.morgan@speckle.ncsl.nist.gov>
Subject: Re: Do these tubes have another number???
On Thu, 13 Oct 1994 19:03:29 -0500,
James B. Beyer <beyer@eceserv0.ece.wisc.edu> wrote:
```

```
>
        5814A=12SN7GT
Anchorites,
The 5814 is a NINE-PIN miniature tube having the electrical
characteristics of the OCTAL 12SN7: medium mu double triode.
If you put one into a socket marked for a 12AU7, it'll like work ok.
-- Roy --
Roy Morgan / Tech A-266 / NIST / Gaithersburg MD 20899
(National Institute of Standards and Technology, formerly NBS)
301-975-3254 Fax: 301-948-6213 Internet: morgan@speckle.ncsl.nist.gov
From owner-boatanchors@gnu.ai.mit.edu Fri Oct 14 19:30:22 1994
From: rdkeys@csemail (R. D. Keys)
Message-Id: <9410141751.AA100910@csemail.cropsci.ncsu.edu>
Subject: Re: Do these tubes have another number???
Date: Fri, 14 Oct 94 13:51:13 EDT
>>I found some tubes recently and don't recognize the number - I believe its
> >you knowlegeable chaps tell me if these tube
> >numbers have a civilian equivilent - one that I might recognize?
> >
> >5686
> >
> >5814A
> >
> Michael,
>
         5814A=12SN7GT
```

>Michael,

I was under the impression that the 5814A was the industrial/milspec typed equivalent of the 12AT7A. It is not, in my opinion the 12SN7, although you can use the two interchangeably in many applications, basing excepted.

The 5814A is a 9 pin miniature tube. It is a common dual triode in 50's and 60's test and receiving equipment.

The 12SN7 is an octal based tube from the earlier era. It is basically similar, although may be closer to a 12AU7 than a 12AT7 (the 6/12SL7 was the high mu version if my memory neurons are intact, this afternoon, and would be closer to the 12AT7 type).

In most applications the 12AT7/12AU7/12AX7, and a couple of the other similar 9 pin dual triodes can be pretty much swapped equally well.

Someone correct my if I am wrong, please.....

Bob NA4G

From owner-boatanchors@gnu.ai.mit.edu Fri Oct 14 07:51:09 1994

Date: Thu, 13 Oct 94 17:47:38 GMT

From: Hugh D. Stegman <driver8@red-eft.la.ca.us> Message-Id: <9410131747.AA14996@red-eft.la.ca.us>

Subject: Re: Drake R-4 compatibility

Jim writes:

>Will a T-4X work or does it have to be a T-4?

I'm not positive, but I'm relatively sure that Drake maintained compatibility for the entire 4-line. What happens is that certain features won't work, like in my T-4XC/R-4B combo the rx doesn't phase-lock the tx (or vice versa) and the rx dial light doesn't go out when the tx is controlling the freq. It's really pretty picky stuff that doesn't effect the basic operation of the rig.

Hugh NV6H

PS: Drake still supports these rigs, can always give 'em a call.

From owner-boatanchors@gnu.ai.mit.edu Fri Oct 14 20:23:02 1994

Date: Fri, 14 Oct 94 13:59:32 EDT

From: censun1!gc@uunet.uu.net (Gary Chatters)

Message-Id: <9410141759.AA03928@fox.gsfc.nasa.gov>

Subject: Re: Drake R-4 compatibility

Jim asks:

>

> I was looking over the Drake list that was posted here awhile back and I was >curious about the correct transmitter to use with my R-4. Will a T-4X work or >does it have to be a T-4? Inquiring minds want to know. I also don't want to >purchase the wrong transmitter. Thanks.

There was some discussion about this on the list in the recent past.

I think either a T-4 or a T-4X will work with your R-4.

The difference is that the T-4 does not have a VFO; it requires the use of the receiver VFO to determine it's transmit frequency. Thus, it is only useful for transceive operations with the R-4. The T-4X has its own VFO.

According to some of the earlier discussion on Drakes, the C line is not quite compatible with the earlier versions for transceive operations (or works a bit differently). I am not sure of the exact differences.

Gary

From owner-boatanchors@gnu.ai.mit.edu Fri Oct 14 08:36:52 1994 Message-Id: <MAILQUEUE-101.941013161243.384@vilas.uwex.edu>

From: "Terry O'Laughlin" <OLAUGHLIN@vilas.uwex.edu>

Date: 13 Oct 94 16:12:43 CDT Subject: Re: Gonset Communicator IV

I had a 2m Gonset Communicator IV ages ago. There is 12VDC supply built in. The unit is AM but I don't recall how it was modulated. I had the matching VFO, which has a reactance modulator built-in. I remember trying to make a contact on a repeater and the hi-brows told me to go away because the audio sounded funny. Appliance operators were around long before no-code.

73s Terry O' WB9GVB

From owner-boatanchors@gnu.ai.mit.edu Fri Oct 14 08:22:23 1994

Message-Id: <m0qvVTN-000uGrC@twisto.eng.hou.compaq.com>

Date: Thu, 13 Oct 94 13:57:06 CDT

From: Earl=Morse%EMC=Srvc%Eng=Hou@bangate.compaq.com

Subject: Hallicrafters HT-37 for sale

A buddy of mine has an HT-37 he wants to get rid of.

Price range is somewhere around \$100. I'm not sure whether that's a deal or not.

He wasn't too hot on shipping it so pickup in the Houston area is preferable.

You can call Michael at 713-448-1551.

He doesn't have Internet access, but I can forward some mail to him. If you are serious you had better call.

Earl Morse
KZ8E
kz8e@bangate.compaq.com

From owner-boatanchors@gnu.ai.mit.edu Fri Oct 14 07:20:16 1994

Date: 13 Oct 94 08:07:00 -0700 From: BRICKEY_PETER@tandem.com

Message-Id: <199410130809.AA25401@comm.Tandem.COM>

Subject: HW101 and another

Hi;

Thanks for all the info on the HW101, I did get it tuned up and on the air. I also ordered a operations manual for Heathkit.

I have another piece of equipment that I need a manual for, I picked up a Curtis Iambic Keyer, model EK-39M. This is a solid state unit made, I think in the 70's. I know that its not a real boatanchor, but I would sure appreciate some info on it. I contacted Curtis and was told that they have no info on their older equipment and that they were out of 'that' business.

73's de Peter KD6KDR

From owner-boatanchors@gnu.ai.mit.edu Fri Oct 14 17:16:53 1994

Date: Fri, 14 Oct 1994 16:31:24 -0400

From: dsnowden@ccd.harris.com (Doug Snowden)

Message-Id: <9410142031.AA36830@rs2>

Subject: KNOBS NEEDED

I need three large knobs (maybe 2/12 inches) for a 1/4 inch shaft. I need them for my amplifier project. I have other knobs to trade - or cash. I have extra Drake knobs available.

Doug, N4IJ dsnowden@ccd.harris.com

From owner-boatanchors@gnu.ai.mit.edu Fri Oct 14 21:41:17 1994

Date: Fri, 14 Oct 94 13:27:43 HST

From: jeffrey@math.hawaii.edu (Jeffrey Herman)

Message-Id: <9410142327.AA02263@kahuna.math.hawaii.edu>

Subject: old books

Here's something that might be of interest to a few of you; yanked it off of rec.radio.shortwave.

Jeff NH6IL

Article: 61276 of rec.radio.shortwave

>From: kh2ar@aol.com (KH2AR)

Subject: Old electronics books available

I have some old electronics books available for trade, sale, etc. They are:

- 1. Practical Disc Recording, Gernsback Library No. 39, by Richard H. Dorf, 1948.
- 2. RCA Receiving Tube Manual, 1940.
- 3. & 4. RCA Receiving Tube Manual, 1947 (2 copies).

Books are all in fair to good condition, I am interested in any pre-1950 radio magazines, older WRTHs, little bit of cash, etc. If you're interested, please leave me a note here or call.

Jim Pogue Memphis

PH: (901) 544-3348 (weekdays)

(901) 873-4291 (evenings and weekends)

From owner-boatanchors@gnu.ai.mit.edu Fri Oct 14 10:41:31 1994

Date: Fri, 14 Oct 94 07:02 EST

From: Emil Switzer <SWITZER+_E%A1%Electromagnetic_Sciences@mcimail.com>

Subject: RE QRP

Message-Id: <81941014120218/0006082972NA5EM@MCIMAIL.COM>

TO: BOATANCHORS

DOES ANYONE KNOW WHAT HAPPENED TO THE QRP REFLECTOR THAT USED TO BE ON THE MAJORDOMO SERVER?

73

From owner-boatanchors@gnu.ai.mit.edu Fri Oct 14 08:31:05 1994

Message-Id: <MAILQUEUE-101.941013160641.416@vilas.uwex.edu>

From: "Terry O'Laughlin" <OLAUGHLIN@vilas.uwex.edu>

Date: 13 Oct 94 16:06:41 CDT

Subject: R-390(A) antenna connectors

I have several new and used AMP twin-ax connectors for the R-390 or A antenna connections. \$8.00 for new, \$5.00 for used, plus shipping.

(If you've been using the type "C" (or "whip") antenna input, you've been bypassing the tuned RF circuits and going direct into the RF amp tube,)

I also have a partial spool of twinax, RG-22A if memory serves me right. I put RG-8 into the twinax connectors, grounding one pin. If you're a purist and want balanced feedline, I'd be willing to part with this cable whole or by the foot.

73s Terry O' WB9GVB

From owner-boatanchors@gnu.ai.mit.edu Fri Oct 14 09:06:48 1994 Message-Id: <MAILQUEUE-101.941013212635.352@vilas.uwex.edu>

From: "Terry O'Laughlin" <OLAUGHLIN@vilas.uwex.edu>

Date: 13 Oct 94 21:26:35 CDT Subject: Racal list available

With the help of Tom Bryan and Mark Glusker, I now have a Racal list up and running. If you'd like a copy let me know.

73s Terry O' WB9GVB

From owner-boatanchors@gnu.ai.mit.edu Sat Oct 15 00:35:20 1994

Date: Fri, 14 Oct 1994 21:23:25 -0500 (CDT)

From: Adrian Weiss WORSP English Department <AWEISS@charlie.usd.edu>

Message-Id: <941014212325.b8be@charlie.usd.edu>

Subject: subscribe

subscribe

From owner-boatanchors@gnu.ai.mit.edu Fri Oct 14 09:24:29 1994

Date: Thu, 13 Oct 94 20:21:34 HST

From: jeffrey@math.hawaii.edu (Jeffrey Herman)

Message-Id: <9410140621.AA28573@kahuna.math.hawaii.edu>

Subject: TTY; Tube

Here's a couple more posts from r.r.swap that might be of interest. Jeff NH6IL $\,$

Article: 16023 of rec.radio.swap

>From: rmoodyg@bcfreenet.seflin.lib.fl.us (Richard M. Gillingham)

Subject: [TELETYPE EQUIPMENT]

I have several clean, working M-28 and a M-15 plus a fair supply of M-28 parts that I would like to find a home for. Of course I know its not worth anything, but I hate to trash it.

Stuff includes a M-28 ASR, 60/67/100 with independent underdome reperf, also 3 speed; a M-28 KSR, 60/67/100; a M-15 with table that prints well; various motors, typing units, paper winders, tape winders, and other parts and paraphernalia (however you spell that).

W4PJI

email rmoodyg@bcfreenet.seflin.lib.fl.us or rmoodyg@aol.com
-Richard M. Gillingham
rmoodyg@bcfreenet.seflin.lib.fl.us

Article: 16026 of rec.radio.swap

>From: gayhart1@mailhub.scf.lmsc.lockheed.com (Bill Gayhart)

Subject: EIMAC 8874 4-SALE

I HAVE A BRAND NEW 8874 TUBE. A.E.S. PRICE \$420 MINE \$200. PLEASE E-MAIL

BILL WZ7W

From owner-boatanchors@gnu.ai.mit.edu Fri Oct 14 20:17:16 1994

From: rdkeys@csemail (R. D. Keys)

Message-Id: <9410141801.AA100943@csemail.cropsci.ncsu.edu>

Subject: Re: your mail

>

Date: Fri, 14 Oct 94 14:01:08 EDT

```
> - Greetings, Boatanchor Enthusiasts -
> A bit of history portrayed. Borrow a copy of "the institute," the
> newspaper of the IEEE for September, 94. On page 3 is a picture
> of the Poulsen Arc transmitter in Lyngby, Denmark, along with a
> short blurb.
```

Rhett - KE4HIH

Ahhhhhh..... what a fine day for a boatanchor trip back into time.....

Can you scan the image into a .eps file? It is a fine bit of history.

Too bad such CW transmitters are not very workable nor practical

on 160 meters. Technically, they are A1 emitters, so should still be legal, from the reality point of view. I am not sure they would meet the purity of emissions standards for harmonics at -30db, although they might be workable with a bandpass filter.

Keying the beasts by the backshunt method (remember that the rig is full on once the arc is struck, and that the RF has to go somewhere)(the method keys alternately from dummy load to antenna) would be a tour-de-force for most modern antenna systems and keying systems.... (:+}}.....

73 Bob NA4G

- p.s. Just watch the striking of the arc.... they have been known to throw the arc electrodes BACK at the operator when the arc strikes!
- p.p.s. Also, that funky cyclotron dinosaur at Berkeley is a converted 100KW Federal Arc rig, if memory serves me correctly.....

From owner-boatanchors@gnu.ai.mit.edu Fri Oct 14 20:51:55 1994
From: rdkeys@csemail (R. D. Keys)
Message-Id: <9410141832.AA100993@csemail.cropsci.ncsu.edu>
Subject: Re: your mail
Date: Fri, 14 Oct 94 14:32:01 EDT

> To: boatanchors@gnu.ai.mit.edu
> >From: Richard Biddle <rbiddle@madvax.mo.ti.com>
> Subject: Name Plate for BC-224B
> Greetings all.
> Would anyone happen to have a name plate for an RCA BC-224B (or
> similar model) that they could make a clean photocopy of for me?
> I am fixing up old project and the name plate is missing. Of
> course I'd love to find a source for the real thing, but I though

> I would cobble one up from a copy as a last resort.

```
I don't have a nameplate for you. Good luck, tho.

> E-mail me if you can help. I'll gladly pay a fair price.
> On a related note, I know there is an ftp site at
> ishtar.med.jhu.edu with a pub/radio directory for collecting
> boat-anchor pictures. (Run by Mark, WA3YNO.) Any interest in
> scanned images of labels and so-forth being placed there for
> restorations?

YES YES YES YES YES YES YES ETC!!!!!!!!
Contact AB4EL@Cybernetics.NET as he maintains a site on sunsite.unc.edu.
> Thanks,
> Richard
> KB5WLH
>
```

73 Bob NA4G